

**ABSTRACT**

A system is provided for sealing a space in a wellbore formed in an earth formation. The system has a swelleable body arranged in the wellbore in a manner so as to seal the space upon swelling of the swelleable body, the swelleable body being susceptible of being in contact with formation water flowing into the wellbore, the swelleable body including a matrix material provided with a compound soluble in the formation water. The matrix material substantially prevents or restricts migration of the compound out of the swelleable body and allows migration of the formation water into the swelleable body by osmosis so as to induce swelling of the swelleable body upon migration of the formation water into the swelleable body.